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ABSTRACT

Nearly all school reforms, regardless of their scope or intended target, share a number of characteristics. This report reviews the essential elements of planning, implementing, and sustaining school reform and presents eight key lessons to guide prospective reformers. The lessons are drawn from 12 major studies of education reform funded by the U.S. Department of Education, Office of Educational Research and Improvement (OERI) between 1990 and 1995. These studies were built around case analyses describing practices that educators could emulate, or at least learn from, if they wanted to undertake work in a particular reform area. The lessons, which emphasize a comprehensive, strategic approach to school reform, center on the issues of leadership, goals, timing, training, flexibility, infrastructure, resource management, and self-assessment. Appendices contain planning guides, worksheets, and a brief description of each of the OERI education reform studies. (Contains 32 references.) (LMI)

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STUDIES OF
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Office of Educational Research and Improvement
U.S. Department of Education

Studies of Education Reform

FITTING THE PIECES
EDUCATION REFORM THAT WORKS

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The Studies of Education Reform were initiated by the former Office of Research in OERI under the guiding hand of its Acting Director, Joseph C. Conaty, currently Director of OERI's National Institute on Student Achievement, Curriculum, and Assessment.

Studies of Education Reform

The 12 studies were commissioned by the Office of Educational Research and Improvement (OERI) in 1991 and were all completed by fall 1995. Each study comprises three volumes. Volume I contains a discussion of the study, case study summaries of the schools or school districts examined, and recommendations. Volume II contains detailed case studies. Volume III is a technical appendix explaining the study's methodology. OERI is publishing all Volumes I as a set. Titles in this series are:

Systemic Reform
Early Childhood Reform in Seven Communities
Education Reform and Students At Risk
Parent and Community Involvement in Education
The Uses of Time for Teaching and Learning
Systemic Reform in the Professionalism of Educators
Study of Curriculum Reform
Assessment of Student Performance
Assessment of School-Based Management
School Reform and Student Diversity
Technology and Education Reform
Study of School-to-Work Initiatives

The other two volumes for each study are available through the Education Resources Information Center (ERIC) system.

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SUMMARY

Successful education reformers develop practical strategies to manage change in a systematic way. School reform can be a complex undertaking that requires careful thought and administration, and nearly all reforms, regardless of their scope or intended target, share a number of characteristics. This report reviews the essential elements of planning, implementing, and sustaining school reform. It is designed to assist policymakers and practitioners at the district, school, and community levels in creating strategies that will enable them to increase student learning.

While many factors affect a reform's likelihood of success or failure, this report presents eight key lessons to guide prospective reformers. These lessons are drawn from 12 major studies of education reform funded by the U.S. Department of Education, Office of Educational Research and Improvement (OERI). Taken together, these lessons emphasize a comprehensive, strategic, and common-sense approach to school reform—one too often overlooked as reforms are rushed from design to implementation. While the lessons are not arranged in any particular order, they do identify a cluster of concerns that relate to the reform process. Planning guides and worksheets, provided in Appendix A, can assist motivated readers in formulating and structuring their initial reform efforts. In summary, the eight key lessons are the following:

Planning Reform Efforts

1) Leadership: Strong leadership enhances the prospect of successful reform.

2) Goals: Reform goals should be based on a shared vision and have the active support of a wide range of stakeholders who participate in achieving them.

3) Timing: School reform takes time and involves risk.

Implementing Proposed Reforms

4) Training: Participants must have training before they implement reform.

5) Flexibility: Reform strategies should be flexible to accommodate multiple solutions to a given problem.

6) Infrastructure: Reform may require redesigning organizational infrastructure.

Sustaining Ongoing Reforms

7) Managing Resources: Reform prospects improve if there is a means to redirect or reallocate resources in ways that meet the needs of the new, emerging system. Reform is not cost-free.

8) Self-Assessment: Reform is an ongoing process.

Those developing a reform proposal, as well as those engaged in ongoing projects, are encouraged to use these lessons and planning guides to structure their activities. Although this report is intended to describe the important elements that underlie all successful reform efforts, readers are cautioned not to treat lessons as discrete elements that may be adopted in a piecemeal fashion. Each lesson described is a piece of a larger puzzle that is called reform—and the successful reformer ensures that all the pieces are there before beginning assembly.

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INTRODUCTION

Education reform is about improving what goes on in schools. Reforms often target classroom instructional issues—such as content and pedagogy—or focus on larger organizational aspects such as the structure and decision-making processes of schools. Interestingly, although the scope of work varies widely, nearly all educators face a similar set of challenges when it comes to planning, implementing, and sustaining reform. Whether reform involves minor changes in classroom practice or major administrative restructuring, successful reformers adopt a similar set of strategies to overcome obstacles.

This report draws upon a series of studies on school reform to describe a set of strategies commonly used by educators to achieve their reform goals. It identifies innovative techniques developed by experienced reformers through eight lessons that reflect essential components of successful reform. Interactive planning guides are provided in Appendix A to assist motivated educators in jump-starting reform in their own community. While all educators can learn from the information presented here, it is primarily targeted at school district administrators and school staff to help them gain a better understanding of the strategies they may adopt to initiate successful reform.

About the Education Reform Studies

This report is based on 12 studies of education reform conducted by the U.S. Department of Education, Office of Educational Research and Improvement (OERI) between 1990 and 1995. These studies were built around case analyses describing practices that educators could emulate, or at least learn from, if they wanted to undertake work in a particular reform area. The cross-cutting questions that guided the research teams were as follows:

- What are the incentives for and barriers to reform or restructuring? What makes these incentives effective? How are the barriers overcome?
- How is reform supported and successfully implemented, both during implementation and in the larger policy environment?
- What is the source, nature, and the content of information that plays a major role in reform or restructuring? What is the role of research-based information?

The OERI research projects spanned a variety of reform efforts. Some studies focused on particular populations, including at-risk and limited-English proficient students, while others focused on pedagogy, assessment, and instructional practices. Some studies addressed broader issues, such as management and school restructuring. The 12 studies are described in Appendix B.

The Current Focus on Education Reform

For most of the 20th century, reformers have been asking whether schools are adequately preparing students to assume the responsibility of employment, citizenship, and family life. During the 1980s, much attention was paid to the role that schools played in preparing the nation's future work force. In particular, there was evidence that the skills of American students were falling behind those of students in other countries, perhaps jeopardizing our nation's future competitive strength. At the time, there were many efforts to address the perceived problems.

Several major reports, *A Nation at Risk* (National Commission on Excellence in Education 1983), *Action for Excellence* (Education Commission of the States 1983), and *Educating Americans for the 21st Century* (National Science Board 1983), proposed strategies to bolster the traditional education system by changing school "inputs" (e.g., increased number of academic courses required for graduation, increased attendance standards, and increased student testing) as a way of improving student achievement. Others approached the problem of achievement by looking at educational processes. In particular, Boyer's *High School* (Boyer 1983), Goodlad's *A Place Called School* (Goodlad 1984), and Sizer's *Horace's Compromise* (Sizer 1984) examined teaching and learning environments that were closer to the classroom. These studies called for changes in how schools were organized in order to increase academic support for students and to improve the quality of interaction between teachers and students.

Taken together, these reports and analyses raised concerns at all levels of government that schools were not meeting the nation's expectations. The 1980s response to this call to arms was new mandates (e.g., new graduation requirements, more performance tests, and a longer school year). At the federal level, for example, interest in articulating some common framework for educational goals culminated in the 1989 "Education Summit" and the President's *AMERICA 2000* initiative. Moreover, states became particularly active in the reform movement, with their initiatives emphasizing graduation requirements, standards for teaching credentials, and school curriculum. Although many school districts had set standards that were higher than those required by new state initiatives, the states provided an impetus that supported and promoted change. Similarly, school districts became active participants in articulating the reform agenda, implementing changes in student standards, curriculum, instructional methods, school organization, class size, and standards for teachers, as well as increasing principal, teacher, and parental control over school as well as classroom decision making.

These and other developments during the 1980s are part of the current reform legacy. However, the 1990s school reform effort has taken another direction. Recently, education reformers have turned their attention to results and the quality of student learning, and 1980s efforts to mandate improvements in student performance have been supplanted by school-based continuous improvement strategies built around shared objectives for students. Standards for performance, often in the form of state or combined state and local curriculum frameworks, have been coupled with strategies to build staff capacity. Teachers, often viewed as central to the reform equation, have become more active in the planning process. In fact, classroom instructors are now recognized as collaborators and are expected to help determine how best to achieve desired student results.

This is the context in which the reforms discussed in this report have been introduced. Today, school reformers, practitioners, and policymakers alike recognize that reform is increasingly a "local event," one that is often organized and carried out by school administrators, faculty, parents, community, and even students. In this sense, the OERI studies detail the process of design and implementation of reform in ways that should be beneficial throughout the reform community.

Before Assembling the Reform Puzzle

These 12 OERI studies identify a series of issues that, when taken together, account for many of the problems that educators confront when planning, implementing, and sustaining school reform. As such, the lessons offered below are not intended to be adopted in a piecemeal or serial fashion. Although some attempt has been made to list strategies in the order in which reforms characteristically proceed, the array is not meant to imply a sequence of events. Rather, this list is intended to describe important elements that must go into a complete reform package.

Ideally, the committed education reformer would address each of these elements before implementing a particular effort. Herein lies the challenge of reform—for it is not sufficient to simply apply these strategies at some point during implementation. Rather, each strategy must be continuously "fine-tuned" throughout the reform process; in other words, effective reformers must plan, build, and support an organizational structure that allows them to continuously address and monitor the pieces of the reform puzzle throughout the process.

These lessons generally cluster around phases of the reform process. The first three lessons address issues of planning (leadership, goals, and timing); the next three address issues of implementation (training, flexibility, and infrastructure); and the last two focus on sustaining reform (managing resources and self-assessment). Planning guides and worksheets, provided in Appendix A, are designed to help propel and direct the efforts of those attempting to initiate reform. While not necessarily of interest to all reformers, the exercises can help frame the reform debate and, therefore, can be valuable to practitioners and policymakers alike.

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LESSON 1

LEADERSHIP

Strong leadership enhances the prospect of successful reform.

School reformers usually start out with high levels of energy and commitment to the process. Unfortunately, institutionalizing change is a long, arduous process, and over time competing responsibilities and the slow pace at which gains are made can drain enthusiasm. Strong leadership can help ensure that initial reform objectives are achieved. In addition to making key decisions and following through on their implementation, effective leaders build consensus, promote buy-in, and delegate authority among participants. Ultimately, strong leadership is about good management. This lesson details the essential attributes of reform leaders, and describes how a well-administered project can motivate others to internalize reform goals.

Strong leaders lay a groundwork for reform.

Teachers, administrators, and community members often hold well-formed expectations about how schools should function and what students are capable of learning. Many times, individuals' beliefs and practices are incompatible with an envisioned reform strategy: teachers may be uncomfortable about deviating from their time-honored curriculum; administrators may be hesitant to relinquish authority for school operations; or parents may be reluctant to risk their children's education on an "untested" reform (Curriculum, 81). This can mean that the individuals responsible for implementing reform may be asked to put their personal perceptions and experience aside because they conflict with reform objectives. Recognizing that not all participants will agree on all aspects of a reform strategy, strong reform leaders work with others to articulate a vision and assure that it is shared among project participants.

A clearly articulated vision and supportive organizational environment can help drive reform implementation, particularly if they enable individuals to align their own beliefs with program goals. This does not mean that a strong leader pens a vision for all individuals to adopt; rather, it means that he or she guides participants in developing a consensus viewpoint that is based on input from all individuals involved in the reform. When participants perceive that the reform objectives reflect many of their personally held beliefs about education, they are often more willing to join the effort or dedicate time to the project.

To initiate the vision-building process, a high-level administrator or group of prominent education leaders are sometimes asked to champion the project. Credible, highly visible advocates can serve as the seed around which reform crystallizes, and many times these individuals can identify additional resources or recruit others to join the reform effort. Ideally, these leaders are "well respected inside and outside of their organizations, . . . accessible . . . and comfort-

able with, and visibly involved in change" (Teacher Professionalism, 39). However, having high-level representation is not a minor point, as noted in the *School-to-Work* study:

> Where school-to-work finds an advocate at the executive level, the reform is more likely to take root throughout the educational system. Where the advocacy is absent, school-to-work is likely to remain a tenuous and fragmented activity, however strong the support from other sectors . . . Typically, the most effective school-to-work reforms enjoyed active leadership from the high school executive as well as the support of the school board and district administration.
>
> (School-to-Work, 72)

Nonetheless, it is not enough to secure support at high levels. Although individuals may be impressed that a recognized education or community leader is involved in a reform, it is the substance of the vision, the manner in which it is conveyed, and the way in which individuals are involved that ultimately determine how a school responds to a proposed reform.

Strong leaders secure buy-in.

Sufficient resources are seldom available to provide planning time for all participants involved in designing and implementing reforms. As such, most education reformers rely on the goodwill of teachers, administrators, and community volunteers, who donate their time and expertise for what they believe is a worthwhile cause. As noted in Lesson 2, keeping people involved and enthusiastic often means involving individuals in all aspects of the reform process. Paradoxically, the stronger the core leadership, the more likely it is that the reform effort can be decentralized and vested in its participants.

According to one principal, "I have the big picture of what's going on in the school. But I don't feel like I have to be the leader of every activity. I have good people to work with, and they are capable of leadership too."

(Adler 1995)

For example, although the restructuring of the Patterson Career Center (Dayton, OH) for participatory management could not have been accomplished without a strong principal, whose vision, commitment, and persistence were resources in their own right, it was the manner in which the principal worked that determined the project's success. Referred to as "Mr. Reform" by project participants, the principal was widely credited with not only developing a unified identity, mission, philosophy, and strategic direction for the school, but also with involving others in the planning, leadership, and decision making that was the driving force behind the initiative (School-to-Work, 74). Thus, the trademark of his success was to inspire the participants to produce by example, using their ideas as the building blocks for the reform effort.

Creating a positive reform environment requires finding boosters who are committed to the reform goals. As noted in the *Teacher Professionalism* study, "dispersed leadership" increases the sense of ownership across the school community, as well as enables innovative programs to overcome obstacles, because individuals at all levels of the organization are willing to lend a hand when reform is threatened. Thus, it is clear why successful leaders, such as those in the Toronto Learning Consortium (Toronto, Canada), can "recognize 'readiness' in individuals and situations, and act by encouraging others to assume leadership roles through the devel-

opment of a critical mass of expertise" (Teacher Professionalism, 38–39). As key proponents of reform leave a school or a community, other staff are not only knowledgeable but also prepared to assume more active roles. Reform efforts that fail to clearly communicate reform objectives or neglect to involve staff in the overall structure of the project deprive themselves of "multiple sources of leadership and enthusiasm [and] will have a hard time sustaining themselves" (Technology, 119).

Strong leaders delegate responsibility.

An effective reform leader strives to find the proper balance between executive and committee decision making. While strong leadership can help ensure that reform goals stay on track, investing too much power in a single individual can be counterproductive. While everyone may look to a charismatic principal or teacher to provide direction and leadership, the reform may flounder if that person leaves or moves on to another assignment (Olson 1994). Even though investing too much power in a single individual can be counterproductive, delegating responsibility too widely can also lead to frustration. Turnover among teachers from one year to the next can make it difficult to build on programmatic successes or learn from organizational failures. Further, lack of continuity in instructional programs and loss of organizational memory caused by staff attrition can undermine a reform effort (Uses of Time, 56).

The successful reform leader matches people with tasks to get the most from each participant. Although all participants may be dedicated to the reform's success, not all of them can or will offer similar levels of commitment. Outside demands may limit the time some individuals can contribute to the project, while others may only want to assist in a minimal way. Moreover, not all people desire the same level of responsibility: while some participants may be entirely comfortable taking considerable responsibility, others may prefer to work on modest, closed-ended tasks that do not require extensive monitoring.

LESSON 2

GOALS

Reform goals should be based on a shared vision and have the active support of a wide range of stakeholders who participate in achieving them.

Education reforms endure when key stakeholders internalize reform goals and support implementation strategies. Regardless of the type of reform, positive results are more likely when everyone supports the larger vision, understands their role in the process, and takes responsibility for action. Reformers seeking to create an environment that supports change must engage in a variety of planning and consensus-building activities that motivate individuals to join the effort. This section outlines three necessary components of reform—envisioning goals, building support, and assigning responsibility—and examines how educators undertaking reform have used these elements to lay the framework for a sustained effort.

Envisioning Reform Goals

Schools that are actively engaged in restructuring seek to develop a shared vision that specifically addresses the concerns of their education community. Identifying these issues may involve holding school and community meetings, sponsoring planning workshops and focus groups, or inviting local agencies and business leaders to provide input. The objective here is to build consensus in order to maximize buy-in among key participants. Evidence suggests that institutions that build a common vision often empower individuals to share ownership of the reform, thereby encouraging them to work harder to implement it successfully (School-Based Management, 76). As noted in Lesson 1, this argues for building a reform organization from the grass roots level, rather than attempting to implement a reform unilaterally from the top down.

Once the organizational vision has been defined, reformers must take steps to communicate their ideas. Ideally, they should use simple, direct language to describe the reform so that all participants can understand its objectives. Without a clear reform agenda, even the most well-intentioned plans may founder. For example, when a midwestern state attempted to legislate an education reform plan that was negotiated by the governor and the business community, researchers found that many local educators did not feel that it clearly articulated student learning

The guiding principles for Project C3 (Communities, Corporations, and Classrooms), a partnership between the community and the school district, emerged out of a visioning process involving 25 Chief Executive Officers of leading community corporations. In an effort to link classroom instruction to real-life applications, the community leaders agreed upon a set of skills that students need in order to function in the real world.

(Community Involvement, Vol. II, 54)

objectives (Systemic Reform, 43). Due to this confusion, initial attempts to implement changes that were coordinated with this vision met with resistance and apathy from the teachers who were ultimately responsible for implementation strategies. Thus, an inclusive envisioning process that specifically identifies reform objectives can define a clear set of program goals, while securing ongoing participation from key constituencies.

Identifying a Common Vision for Reform

Recognizing that their students needed to be better prepared for "life after graduation," a small group of high school teachers set out to reform their institution's educational program. To design an intervention plan, the teachers sought input and direction from school and community stakeholders as well as reviewed research and information on existing reform models.

The school's strategic planning process involved more than 50 teachers, students, parents, business people, and staff. During a three-day meeting, the group developed a mission statement and set of beliefs for the reform initiative. This was followed by a two-day staff retreat at which time the group reached consensus on the mission and beliefs and developed a list of standards. This provided a system for soliciting ideas and concerns of representatives from a cross-section of the school and community.

(School-to-Work, 4–6)

Building Support for Reform

While a shared vision typically translates into widespread support for a proposed reform, how this enthusiasm is transformed into action is equally important. A common mistake that many schools make is trying to accomplish too much with inadequate resources; for instance, schools may attempt a reform that is too ambitious or gives too few participants responsibility for managing the reform process. Reform of any kind inevitably requires a significant amount of time and effort from many individuals. Thus, reformers who attempt to take on too big a challenge risk becoming overwhelmed by the demands that reform entails, or becoming stymied by "over-conscientiousness" as they systematically attempt to implement changes that will benefit all students. Unfortunately, all to often burnout follows such unsustainable dedication (Uses of Time, Vol. II, 6).

This kind of burnout is a particular problem in schools that rely heavily on teacher goodwill to achieve reform. Generally, unless steps are taken to build a network of participants who can share responsibility for implementing changes, the burden of administration and committee work, along with upheavals caused by reform activities, can quickly take their toll (Uses of Time, Vol. II, 6–7). For instance, the demands of undertaking a large reform project on a volunteer basis drove some teachers to request transfers out of one middle school in Minnesota (Uses of Time, 72).

Indeed, much of the research on school-based management suggests that teachers are often overwhelmed by their enormous teaching and management workload. Asking instructors to spearhead a reform on top of their existing responsibilities can be extraordinarily demanding. Successful reform programs build support among a critical mass of teachers and other constituents, who can then collaborate to accomplish group goals. Forming subcommittees of teachers and other interested parties can reduce the workload for individual teachers by allowing greater numbers of people to share responsibility (School-Based Management, 68).

Unless there is consensus among teachers, administrators, parents, and the community at large, the reform process is difficult to sustain. Consensus is most often achieved when reformers reach out to solicit ideas and suggestions from all participants and incorporate feedback to address individuals' concerns. Since reforming school curriculum often goes hand-in-hand with changing classroom and instructional roles, many reforms require that students assume an active role in their own education. Like other stakeholders, students must understand the purpose of a reform and feel that it is in their best interest. When students do not understand why certain changes are advanced and are not enlisted in the reform process, they may actively resist proposed improvements.

MARGINALIZING REFORM: THE IMPORTANCE OF NETWORKING

After attending a national conference, a nucleus of secondary math teachers were inspired to restructure the mathematics curriculum at their school. However, because not all teachers were consulted before the curriculum was developed, some instructors resisted the reform attempt, partially because they did not feel that they were participating in the decision-making process.

At the district level, administrative support also lagged. Failure to consult with school officials meant that not everyone agreed on how to jump-start reform; as a result, administrators were hesitant to exert leadership. Moreover, the mathematics reform failed to gain support in the community, primarily because of concern that new instructional materials would jeopardize students' academic performance.

Because they were unable to enlist the support of others in the learning community, the teachers ultimately could not extend the initial reform effort, and it became fragmented because of the lack of cohesive, schoolwide or communitywide support for the proposed changes.

(Curriculum, 15–16)

Assigning Reform Responsibilities

An inclusive decision-making process that involves individuals at all levels of the institution can support the reform environment by assuring that all parties "invest" in the undertaking. As noted in Lesson 1, decentralizing authority can also diminish isolation and spread the burden of reform among a group of interested players. Moreover, empowering individuals to make decisions can build their commitment to the reform process. A survey of classroom teachers, for example, determined that "a greater sense of control over inservice is accompanied by a rate of participation considerably greater than reported in national surveys" (Systemic Reform, 77). Similarly, the extent to which teachers are involved in assigning and implementing new assessment systems affects the degree to which they are eventually appropriated in the classroom (Assessment, 6-5). For example, Vermont's prescribed learning portfolio at Maple Leaf Middle School enjoys extensive support, in part because teachers have some flexibility in designing assessment tasks for their classroom. Although policy is established at the administrative level

in the organizational hierarchy, programmatic aspects of the reform are left to the discretion of those who are implementing it (Assessment, 6-13–6-14).

". . . Because they have had little input in the decision-making process, several faculty members have decided that it is better to focus their time, energy, and talents on other things. Internal divisions have resulted in certain factions spending an inordinate amount of unscheduled time complaining about other faculty members' class loads and contributions to the school. In addition, time is spent protecting 'turf' rather than working for the collective benefit of the entire school. These activities not only represent a substantial amount of lost time, they are by their nature counterproductive to the work of the school."

(Uses of Time, Vol. II, 64–72)

A decision-making process that disperses responsibility among staff can also help secure widespread support for reform. Effectively, "what distinguished the schools where school-based management worked from the struggling schools was the extent to which power was dispersed throughout the school beyond the principal and council to subcommittees and other decision-making groups, like teaching teams and ad hoc committees. In contrast, schools that struggled with reform tended to concentrate power in a single school council composed of a small group of committed teachers painfully aware they did not have broad representation" (School-Based Management, 122–23). Moreover, teachers in schools that discouraged stakeholders from becoming involved felt isolated.

Ultimately, organizational and school governance structures contribute to the success of education reform. A decentralized decision-making structure can support a "culture" of reform—in other words, such a structure is the glue that holds the reform process together. The *Student Diversity* study noted that exemplary sites "restructured their school into smaller school organizations such as 'families' that heightened the connections among students, between teachers and students, and among teachers." These smaller organizational units, in turn, made it easier to incorporate new limited-English proficient (LEP) students into the flow of instruction (Student Diversity, I-2.4).

LESSON

3

TIMING

School reform takes time and involves risk.

Reform is neither easy nor quick; many reforms require years of work before producing measurable results. While patience and perseverance are two of the strongest assets of any education reformer, there are a number of strategies that educators have developed to increase their likelihood of success. These include making the most efficient use of available time, and capitalizing on the opportunities that risk may provide. This lesson reviews how some education reformers have responded to pressure in order to secure meaningful reform in their own schools.

Using Time Intelligently

Time is the most critical resource when implementing reform. Although it seems that there is never enough of it to plan programs or organize training activities, the intelligent reformer anticipates and makes efficient use of the time that is available before implementation, as well as the lag between startup and initial outcomes.

". . . [T]he amount of time allowed for development, introduction, and institutionalization of assessment reform can have dramatic impact upon [the] ability to sustain reform efforts and to meet various objectives."

(Assessment, 5-11)

Sometimes it is better to allow for additional time up-front than to rush into reform. For example, the state of Vermont took two and a half years to develop a set of goals for education. Although the goals themselves could have been drafted rather quickly according to one State Department of Education official, the state instead made an effort to involve and inform the public, building "a general feeling of ownership" that they hoped would prevent the type of public outcry that derailed goal setting activities in other states (Systemic Reform, Vol. II, 86). Similarly, when embarking on an innovative curriculum reform emphasizing Latino and Chicano experiences, the principal at Evelyn Hanshaw Middle School (Modesto, California) spent a year planning the school program, recruiting faculty, and garnering support in the community (Student Diversity, H-16–H-17, Appendix 32).

Taking Risks

Once introduced, reforms may require considerable time to gain widespread support. The change process often extends over a number of years, and this period of time can be stressful as individuals and organizations struggle to adopt new strategies. When risks are high, the pres-

TAKING RISKS FOR REFORM: SOUTH CREEK MIDDLE SCHOOL

Even though there was little political support to justify his position, the superintendent of South Creek School District lobbied to open and equip a technology magnet school. To increase the likelihood of success, a new school principal was hired one year before the school was opened. Charged with providing "state-of-the-art" instruction, the principal involved teachers and other school staff in curricular and instructional planning in the summer preceding the school year.

Careful planning and calculated risk taking paid off handsomely. In its first year, South Creek students scored second in their district in their mastery of grade 6 math objectives. Despite the fact that the school has the next to lowest SES (socio-economic status) composite in the district, South Creek students also score consistently higher than their peers on state assessments, and teacher satisfaction and student attendance are remarkably high.

(Technology, 55)

sure to produce results can be overwhelming; however, expecting returns too early in the process can be a prescription for failure. For example, when one elementary school in Louisiana was asked to simultaneously implement reforms and to demonstrate their effectiveness (e.g., through improved test scores), the reform effort faltered because test scores did not immediately improve. Concerned that the reform might not succeed, the district opted to drop the project and did not allot continuation funds. Protecting schools from immediate "high-stakes accountability" may be one key to success (Uses of Time, 74–75).

Reform is a process of trial and error; during the initial reform process, incremental course corrections are common. Given the slow process by which gains are won, several respondents in the *Uses of Time* study noted that it is possible to reduce the pressure to succeed early. The Wheeler School (Jefferson County, Kentucky), for instance, arranged for the superintendent to enforce a "hold harmless" provision in order to free staff to take risks when developing a high school dropout program. This provision enabled the teachers to experiment with innovative strategies. One unexpected outcome was that the opportunity to work together produced a more cohesive school environment and impressive scholastic results (Uses of Time, 75).

NURTURING REFORM IN THE MIDWEST

The principal of an ethnically diverse, economically disadvantaged Midwestern school implementing a Paideia curriculum notes that although the program has not resulted in an immediate improvement in standardized test scores, she is willing to wait for results. "We have to give this program time to work—even if it takes 10 years to see a difference," she said. In the meantime, the principal is focusing her efforts on monitoring program quality and implementation internally.

(At Risk, Vol. II, 178)

LESSON 4

TRAINING

Participants must have training before they implement reform.

Education reform often requires fundamental changes in individuals' roles and responsibilities. This may mean that stakeholders are asked to assume new tasks in addition to their normal day-to-day duties, or engage in activities that have little in common with their present work. Regardless of the scope of change, all individuals must have the skills that will enable them to support reform objectives. Ideally, this training occurs before program implementation so that individuals have time to understand and relate their new skills to reform objectives, and to identify confusing issues and potential sources of conflict. This lesson reviews how reform can affect school work environments, and describes some potential strategies that reformers have developed to help participants anticipate change.

Changing Roles and Relationships

Whether reform is targeted at a single classroom or at the entire school, any attempt to implement a reform should begin with the recognition that many will become involved whether by chance or by choice in a proposed project. Clearly, some participants will be more involved in a reform than others; and as such, initial training should be focused on supporting those who will be most affected by the proposed changes. Since others may also contribute to the success of the reform over time, some type of training should also be planned for all individuals who will play a role. Preparing a school for reform may involve equipping individuals with specific skills or, as Lesson 6 will discuss, may require redesigning the organizational structure to support reform objectives.

". . . [N]ew materials and philosophies tend to shake up the traditional roles of teachers and students. . . . [N]ew materials tend to demand that students construct their own knowledge and be active rather than passive learners, as well as for teachers to be facilitators of their students' active learning."

(Curriculum, 16)

Reform can be a complex process that defies intuition and often goes against long-standing procedures. A common mistake that many reformers make is to project their understanding of, and experience with, reform upon others. While the basic concept of a reform may be relatively simple to grasp, putting it into practice may be more challenging than cursory examination might suggest. Most education reforms require individuals to assume new roles and responsibilities to which they are unaccustomed. For example, teachers in districts adopting school-based management are often asked to become more involved in facility administration, a task that requires a number of technical skills including evaluating curriculum and assessment tools, designing professional development sessions, budgeting and

CHANGING CLASSROOM ROLES: TEACHERS AND STUDENTS

When the mathematics department at a high school implemented a new student-centered curriculum, teachers were forced to reexamine their traditional role in the classroom. As part of the curricular reform, teachers were asked to link academic content to real-world applications, and to do so in a manner that encouraged cooperative group work, problem solving, and written and oral communication. While teachers were still expected to assume their familiar position at the front of the room, lecture time was now limited to five minutes, with the remaining time reserved for students to set the pace of their own learning.

Moving teachers both physically and pedagogically away from the center also required that students assume a different classroom role. While before teachers were solely responsible for communicating information, new student-oriented curricula emphasize individual and group efforts among students; as a result, students must now serve as classroom leaders, and interact as participants in class discussions. Thus, reform has changed the respective roles of both instructor and learner, with teachers acting as the facilitators of knowledge, and students taking greater responsibility for their own learning.

(Curriculum, 19–20)

staffing school positions, and setting institutional goals and objectives (School-Based Management, 48, 97). Moreover, changes in organizational relationships, such as the development of articulation agreements between secondary and postsecondary institutions, may require entirely new modes of communication between institutional partners.

Reforms can also change the nature of the relationship between schools and their communities, transforming the roles that family and community members play in the education process. Parents, in particular, are often called upon to become actively involved in their children's education—a task that may require considerable skill building. One means of gaining buy-in among parents is to design training programs that help them to understand how they can support the proposed project. For example, the Minneapolis Public School District offers a Parent Institute that focuses on training parents to take a leadership role in educational problem solving. Specific parenting skills, such as talking with a teacher, are highlighted, as are more general reform-oriented skills that encourage parents to discuss and evaluate the quality of instruction that takes place in their child's class (Community Involvement, 40–41).

Adopting Training Strategies

Expanding educators' knowledge base is one of the key factors in sustaining education reform. Even within their own subject area, teachers must often struggle to remain up-to-date with advances in professional knowledge and changes in state curriculum frameworks. The introduction of a new instructional approach can also be overwhelming to teachers.

". . . [A]cademic work becomes more complex when students try to make sense of biology or literature than when they simply memorize the frog's anatomy or the sentence's structure."

(Systemic Reform, Vol. II, 85)

"Some of the best in-service training we have had was teachers within the school putting on a bunch of mini-workshops that their colleagues could choose from. They seem to really value the voice of experience."

(Teacher Professionalism, Vol. II, 130)

Schools can adopt different strategies to ensure that teachers have the knowledge base they need to undertake and implement reform. Schools that are successfully implementing reforms generally link staff development to project objectives, and involve teachers in identifying their own training needs. Schools in the Spring Branch Independent School District (Texas), for instance, prepare staff development plans that are connected to school-wide improvement efforts (Student Diversity, Vol. II, 3). Schools may also use teachers with special expertise as trainers to maximize resources and teacher buy-in. For example, whenever possible, Mt. Edgecumbe High School (Alaska) takes advantage of staff expertise for in-service training. In addition, the administration sets aside money to send teachers to summer training and national conferences, with the expectation that they will serve as trainers for others upon their return (School-to-Work, 7).

A number of the OERI studies have documented how outside assistance from trained professionals can assist schools in promoting education reform. For example, the *Assessment* study noted that states have frequently found the leg work previously done by others to be useful in helping them conceptualize and develop performance-based assessments. In addition, using expert help to develop and score assessments or to evaluate assessment systems enhanced states' capacities to develop, implement, and track the quality of their assessment systems (Assessment, Chapter 2).

Individual schools may also work with consultants to build teachers' capacities to initiate reform. For example, teachers from Wheeler High School (Jefferson County, Kentucky) attended a nationally recognized professional development center in order to review the research literature and discuss issues related to reform among themselves and with others. Teachers at Wheeler also joined with other instructors to share information on a pilot project addressing participatory management. As part of this project, teachers received on-site technical assistance in designing and implementing a model of shared decision making and attended workshops on consensus building, communications, running productive meetings, problem solving, leadership, and conflict resolution. In addition, the principal and two teachers received special training as facilitators (Uses of Time, 57).

SUPPORTING REFORM

The Accelerated Schools Project offered a five-day training program for teams of 8 to 10 people from individual schools. During the week-long session, participants were advised about the five-year goals of reform, and were taught strategies to implement short- and long-term changes.

Follow-up of school progress a few months later revealed that one-third of schools were floundering in their reform, and another one-third had given up in their effort. Determining that they were trying to do too much over too long a period, the Project subsequently developed a training-and-certification component for reform "coaches" who are based at the school district and who provide regular assistance on reform issues.

(Olson, 1994)

LESSON 5

FLEXIBILITY

Reform strategies should be flexible to accommodate multiple solutions to a given problem.

It is often difficult to reverse direction once a reform strategy has been selected. Shifts in political climate or changes in fiscal resources, however, may require a change in reform plans. Alternatively, unexpected results of a reform may suggest other, equally promising paths to achieving intended goals. Successful reformers are agile: they adopt strategies that can accommodate a range of approaches and that respond to changing conditions and needs. This includes planning multiple solutions to a given problem, developing realistic timelines that avoid "all-or-nothing" approaches, and anticipating conditions that may contribute to achieving reform goals.

Selecting a Strategy

Flexibility is central to any successful reform effort. Once reform participants have developed a common vision, they must select a strategy to accomplish their reform goals. This process can be expedited if time is allotted to research proposed initiatives: often a considerable literature can be found that provides insight into nearly any reform topic. Moreover, most educators are happy to share their thoughts and experiences, and where possible, visits to successful sites can help reformers clarify their goals for learning. Many of the OERI studies noted that exemplary programs were grounded on a solid body of research. For example, in establishing one middle school:

> . . . both the district superintendent and the principal looked to the effective schools research for good practice concepts. This review led to practices such as site-based management teams, the institutionalization of self-studies, and the collection of school climate data. The principal also did an intensive study of the literature on technology and instruction during the year before the school's opening. This review led to the school's emphasis on tools rather than didactic uses of technology.
>
> (Technology, 80–81)

In some cases, education reform proposals may be so new that reformers have little experience or counsel to fall back on when selecting strategies. In these situations, it is often the case that reforms may be "co-opted" from related areas. For example, when seeking to identify school restructuring models, school-based management researchers found that private-sector experiences provided a wealth of pertinent information. Generalizing from the literature on decentralized management, they were able to find different models that could be used to help managers and staff share responsibility for developing strategies. Although each approach had similar goals—to empower staff by ceding them greater responsibility—each model had a different focus that made it suitable in different circumstances.

Accommodating Multiple Solutions

Teachers spend most of their day physically isolated from one another. Since much of their experience is built around activities in their individual classrooms, overly prescriptive reform strategies may actually inhibit reform by preventing teachers from using their natural skills and creativity, and by demanding that they compromise fundamental pedagogical beliefs and values.

The failure of early technology reformers to create a "teacher-proof" curriculum provides a clear example of the pitfalls of an overly regimented reform strategy. Fearing that many educators lacked the knowledge and instructional pedagogy to support technology instruction, early reformers attempted to develop course materials that bypassed teachers to directly engage students. Computer software and simulations that marginalized teachers' classroom roles eventually stymied many reform efforts, in part because teachers found ways of bypassing the materials to emphasize their own goals and teaching style. Today, it has become apparent that

> . . . most successful technology-supported instructional activities seem to take a middle-of-the-road approach, in which there is a curriculum package with a set of basic instructional goals and suggested activities and strategies, but the teacher has [or takes] the opportunity to modify the content and fit it to his or her class and local curriculum concerns.
>
> (Technology, 167)

Offering teachers greater autonomy can actually strengthen the reform process, particularly when educators are encouraged to use their professional judgment to tailor reform strategies to meet their identified classroom needs.

Phasing in Reform

"While vision communicated from a higher level may be important, successful reformers—whether individual teachers, a department, or an entire school—have the autonomy and power to determine how they will put this vision or some modification thereof into practice."

(Curriculum, 61)

Adopting a more flexible approach to reform sometimes entails mixing the "old" with the "new." Many of the OERI studies noted that teachers are often uncertain that proposed reforms will help students learn basic skills or properly prepare them for standardized assessments. As a result, some instructors are reluctant to abandon old practices or materials until they can understand how a particular reform will help students. While not all teachers may fully adopt a proposed reform, those who do may help convince others to change. In short, individual classroom successes coupled with other skills and the freedom to move at a comfortable pace may ultimately make the difference between reforms that work and ones that do not.

Evidence of how reforms may be structured to accommodate multiple approaches comes from a study of exemplary school programs conducted by the OERI *Student Diversity* researchers. Flexible programs were one of the primary characteristics of schools that were successful in meeting their reform goals.

> All the language development programs were flexibly constructed to accommodate students with varying levels of fluency and, where appropriate, students from different language backgrounds. Rather than using a single model for all the LEP students, teachers adjusted curriculum, instruction, and the use of primary language to meet the varying needs of students.
>
> (Student Diversity, I-2.3)

Adapting to the Unexpected

Reform is seldom an isolated event. As individual reforms are adopted, they may trigger complementary changes in other aspects of schooling that support the original intended outcome. For example, new approaches to instruction and curriculum may in turn lead to a restructuring of assessment practices that eventually reinforce curricular change. Alternatively, original reforms may spark new unanticipated ones that address other aspects of education and governance. As such, it is important that reform plans remain somewhat flexible to anticipate and adapt to unexpected changes that may arise.

CHANGING SCHOOL CULTURE IN SAN DIEGO

In response to low achievement on standardized tests, the principal at one elementary school undertook a comprehensive reform effort to increase student performance. A site-based structure of governance was adopted to redesign curriculum and to reorganize the school into four nongraded, age-appropriate "wings."

Unexpectedly, changes have not only affected the schooling and governance process, but also the atmosphere of the school itself. The principal for the school reports both an increase in staff morale and in students' engagement and performance, as well as an improvement in parent attitudes toward the school. Student attendance has also improved dramatically.

(Assessment, Vol. II, 3-1--3-16)

While reform may initially focus on a single issue, it often spreads to other aspects of schooling. Anticipating reforms that may be related to and naturally follow one another may represent an important strategic planning consideration. For instance, one school district that had implemented assessment reforms found it necessary to devote substantial effort to revising curricula. In contrast, a high school in Massachusetts that had implemented an innovative math program coordinated reform in instructional practices with the curriculum; this enabled teachers to link their assessment practices to support the new curriculum and instructional techniques. While reformers may start with a modest objective, they should consider the context for that reform and understand that a range of other reforms may become necessary or possible (Assessment, 6-23).

LESSON 6

INFRASTRUCTURE

Reform may require redesigning organizational infrastructure.

Education reformers look for the most effective ways to organize and deliver classroom instruction and school services. Regardless of the depth and breadth of an undertaking, by definition reform involves change. At some point in time, those involved in the reform process are asked to break with convention and do things in new ways. Invariably, changing the way things are done can affect organizational infrastructure. Mechanisms to disseminate information about a reform and its potential impact can reduce anxiety about a proposed change and support a dialogue that increases cooperation among participants. This lesson examines how education reforms can alter traditional work organizations within schools, and discusses strategies that reformers have used to support the reform climate.

Recasting Institutional Relationships

Reform does not occur in a vacuum. Even relatively small, targeted reforms can have unanticipated spillover effects that may cut across grade levels or departments. For instance, teachers may feel protective about their instructional time and content, or administrators may be concerned about how reform will affect parental support. Thus, reformers must take time to assess the different ways that their proposal will affect school climate in order to minimize conflict and ease project implementation. In some cases, modest changes in the existing school infrastructure can support broad reform objectives.

"There is no silver bullet . . . The search should not be for one key ingredient; the search should be for the inclusion of all of the essential ingredients—and putting them together in a manner that takes full account of the systemic nature of the situation."

(Curriculum, 56)

Misunderstanding is one of the greatest barriers to successful reform. Formal mechanisms for conveying information to and from the school community can ease reform governance by reducing conflict and increasing participant understanding of reform objectives. Typically, schools that are active in their restructuring efforts have multiple mechanisms for disseminating information to school faculty. These communication channels include displaying important reform information in a central location, circulating results and administrative updates in teachers' mailboxes, exhibiting planning meeting agendas in advance to staff and the community, and distributing meeting minutes and results. Feedback loops include having staff or union representatives available to answer questions, planning school meetings to solicit input, and providing time on meeting agendas for group discussions.

In contrast, schools struggling to implement reform have few, if any, mechanisms for sharing information. In these instances, the informal teacher grapevine, a method which proves to be unreliable, is often the main means of communication. For instance, in one Midwestern school implementing a school-within-a-school program for at-risk students, a lack of communication heightened tensions among staff who were involved in the program and those who were not. One teacher's comments suggest that conflicts can be traced to the absence of mechanisms for discourse: "Sometimes I think they are critical because they just don't understand. . . . And they don't choose to find out. Well, really we don't choose to tell them either" (At Risk, Vol. II, 88).

When individuals work together, they are more apt to share ideas and philosophies that can influence each other's conception of reform, and their role within it. To illustrate how collaboration can influence work relationships, consider the experience of a science department at a high school attempting to institute a coordinated science curriculum that, among other things, teaches students to see the connections among biology, chemistry, physics, and earth science. Teachers found that they

> . . . depended upon each other's expertise for learning different aspects of subjects which they might not have known, as well as new instructional strategies. Teachers also got together to brainstorm their ideas, talk them through, and figure out how to put them into practice in their classes. In this context, mentoring of inexperienced teachers by the more experienced teachers was a routine and normal activity. The teachers who were not so creative benefited from the innovative ideas of other teachers.
>
> (Curriculum, 25–26)

Similarly, the success of a recent effort at Cooper Middle School (New Mexico), where curriculum and assessment activities cut across subject areas, was found to hinge upon teachers having an opportunity to work together before implementing new instructional methods. As part of its reform effort, the school has organized itself into "families" of students and teachers who spend most of their day together. To assist teachers in planning their lessons, the school provides instructors with 45 minutes of planning each day to organize integrated activities. Teachers note that without this time it would be much more difficult to implement their restructured educational program because this planning period provided them with a formal mechanism for sharing ideas and information. Moreover, teachers at other schools undertaking curriculum, instruction, and assessment reform note that time together outside of the classroom "is critical to planning and appropriating reforms, particularly if the reforms require them to dramatically change their instructional and assessment techniques" (Assessment, 6-29–6-30).

Further, collaboration can reinforce the appropriation of reforms by providing an avenue for teachers to develop and solidify new skills. At Linda Vista Elementary School (San Diego, California), teachers use their "prep" time to observe their colleagues' use of new instructional practices in the classroom. This "process of working as a team, as well as the sharing of students, empowers teachers at Linda Vista to feel a heightened sense of ownership of the whole school environment" (Student Diversity, H-8). Collaboration can also be instrumental in reinforcing essential changes in school culture. For example, in the *Curriculum* study, collaboration was identified as the key means for resolving tension between the traditional class preparation ethic and new curricular approaches. "Collaboration with fellow teachers in the day-to-day school context can have a powerful influence on teachers' values and beliefs as well as facilitate change in the technical dimension" (Curriculum, 55–56).

In some cases, third parties may be called upon to help bridge interinstitutional gaps where formal relationships do not exist. For example, the Learning Consortium in Toronto provides teachers with professional development opportunities where they can share personal experiences with other teachers, and also highlights "best practices" at workshops and conferences to promote these interactions (Teacher Professionalism, 49). Similarly, in California, a middle school network provides a model for transforming schools that focuses on sharing information among schools that might not typically interact. Placing an emphasis on the whole child and on integrated instruction, the network has developed a train-the-trainers model and a bi-weekly newsletter that discusses substantive issues, news, and regional symposia. According to a leading state administrator, "achievement levels are going up in schools that have been in the partnership for all three years" (Systemic Reform, Vol. II, 12).

Relating to the Community

Many of the reform studies suggest that parents and the community also contribute to the planning process in important ways. Schools that successfully implemented school-based management were most likely to have solicited input from their parent and business communities, and to have used that information to develop new relationships with stakeholders. In Chicago, for instance, school site councils are required to hold at least two publicized public meetings annually to obtain input on the School Improvement Plan, the school budget, and the annual school report (School-Based Management, 157). Furthermore, the majority of schools engaged in active restructuring efforts used newsletters to communicate information about the school's budget, student performance data, school-based management administration (e.g., election results and decisions from council meetings), and curricular themes for the year (School-Based Management, 78).

Sometimes a school district must actually build new relationships with the education community if its reform effort is to persist. For example, the Rochester City School District (Rochester, New York), has developed a parent involvement policy that encourages parents to take a more active role in the school. A Parent Council, composed of members from each school's parent organization, meets

FORMAL AVENUES FOR COMMUNICATION: ENCOURAGING PARTICIPATION AND COOPERATION

Establishing formal avenues for contact and communication is key to the success of the Family and Community Partnership programs in the Minneapolis Public School District. As part of its Partnership for School Success dropout prevention program, the school district has increased community involvement by institutionalizing contact with middle school parents.

To ensure that no one is missed, parents are mailed information and are then contacted by telephone. If no contact is made, program staff make home visits. Such personal contacts have enabled staff and families to learn to trust one another. As a result, parental involvement has increased dramatically. Last year 70 percent of the parents/family members in the program attended at least one meeting during the year, and many parents called program staff to find out what they missed at the meetings.

(Community Involvement, 42–44)

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periodically to propose strategies for addressing issues ranging from student support and curriculum to budgeting and administrative matters. In turn, the school district supports parents' suggestions by developing innovative programs, such as a Family Math Program, in order to engage family members in teaching and modeling high expectations for students (Community Involvement, Vol. II, 157–60).

Communities can also be engaged as reform partners when schools create multiple access points that allow interested individuals to participate in the reform to the extent that they desire. For example, some schools have set up homework hotlines, and others dedicate a phone answering machine for each classroom so that parents can call to get homework information, to leave messages for teachers, or to hear recorded school announcements.

LESSON 7

MANAGING RESOURCES

Reform prospects improve if there is a means to redirect or reallocate resources in ways that meet the needs of the new, emerging system. Reform is not cost-free.

At the very least, reform often requires reallocating existing fiscal and human resources. Authority over budgets and other resources allows schools to support the reform process, often because it enables those implementing the reform to funnel resources to where they are most needed. Many schools that were successful at reform did not wait to be granted control over existing resources, but actively sought new funding. Beyond initiating the reform process, schools need to take into account the ongoing costs of reform in order to plan for the long run. This lesson details some of the costs typically associated with reform and describe some of the ways in which schools can garner resources to support reform efforts.

Funding Reform

Release time for teachers to engage in reform-related activities, such as teacher collaboration or professional development, was identified as crucial in a number of studies (Teacher Professionalism, 114; Uses of Time, 54). While time was an essential resource, as shown in Lesson 3, few schools actually paid for release time to facilitate the reform process. Many schools implementing technology reforms, for example, relied on teachers' volunteer efforts to accomplish the work of reform; in these schools, it was common to find teachers meeting to discuss technology issues at 7:00 A.M. and then again in the evening sometimes until 7:00 P.M. or later (Technology, 86–87).

Cost data on participant donations to reform are difficult to gather, since many costs are assumed by external agents or by the teachers themselves. Indeed, "teachers and administrators indicated that they spent their own personal funds—estimated by most teachers to be in excess of $1,000 per year on items such as food, leisure reading materials, and other instructional materials for individual students" (Community Involvement, 105). Moreover, while schools often require that teachers serve in nontraditional roles, they are seldom compensated for the extra time and responsibility this may involve (Uses of Time, 68). Although volunteer time is a hidden cost, reliance on teacher volunteerism can result in teacher burnout and turnover, and schools may eventually pay by losing valued staff and having to recruit and train new instructors.

Reallocating Resources

Reallocating sufficient funding may be difficult if reforms are highly labor intensive. Most reform programs often require new staff (e.g., school-to-work coordinator, transition specialist, and job coach) in addition to purchasing supplemental equipment and materials (School-to-Work, 166). For instance, lengthening the school year to provide more learning time can increase the costs associated with teacher salaries, which is not an insignificant expense (Uses of Time, 51). Of all the expenditures in a reform effort, human resources often constitute the most substantial and important investment. For example, in one study, participants' salaries accounted for about 60 percent of program expenditures, with the remaining 40 percent allocated to fixed costs, such as materials and supplies (Community Involvement, 106).

Money for training and skill development is another important resource required for reform. For schools implementing school-based management, time and money to support extensive skills development are crucial (School-Based Management, 41). Yet, whereas the average private-sector firm allocates nearly 2 percent of its payroll for training, the typical school spends only 0.5 percent of its budget. Furthermore, expenditures on educational staff development are typically the first to be cut during tight fiscal times, since the importance of these activities is often underestimated. For example, resource constraints forced one large California school district to severely curtail its support for professional training; this in turn acted as a major barrier to the implementation of its School-Based Management program (School-Based Management, 63–64). As noted in Lesson 6, the freedom to restructure and reconfigure schedules can allow schools and districts to provide time for collaboration and learning in a cost-effective manner. Indeed, a combination of these approaches can insure that there is sufficient time and money for this activity (Systemic Reform, 144).

Recognizing that hiring new staff may be impossible, many reformers instead attempt to reconfigure their available resources. The *Uses of Time* study points out that some schools switch to block scheduling to give teachers the opportunity to engage in joint planning, team teaching, and curriculum development (Uses of Time, 29). Schools that are actively involved in restructuring tend to creatively use their authority over the mix to support teaching and learning. For instance, some schools hire less expensive substitute teachers in the short term to cover classrooms and free up teachers' time for common planning periods (School-Based Management, 71–73). Other schools have approached reform by arranging to have school funding allocated to them as a lump sum; these schools can then reallocate at least some of these funds according to reform priorities. Alternatively, a school in Prince William County, Virginia instituted an end-of-the-year budgeting process whereby academic departments pooled their residual funds and focused on overall school improvement issues (School-Based Management, 75).

Many of the schools that were successful at reform did not wait for district administrators to allocate resources or devolve power. Instead, they wrote grants for staff development, restructured schedules for planning time, used in-kind support, and tapped private-sector resources in order to move forward. In one such school (Linda Vista Elementary School in San Diego, California) staff sought a number of grants in order to launch a systemic reform effort. Alternatively, several schools undertaking school-to-work reform formed partnerships with the private sector, drawing on business expertise and in-kind donations

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to secure financial support. Honeywell, for instance, contributed funds and technical assistance to the Metro Tech (Phoenix, Arizona) electronics program, while the airline industry donated equipment and technical assistance to an Aviation Magnet (Louisville, Kentucky).

While initial investment of resources is crucial in the early stages of the reform process, it is not sufficient to sustain a program. When "soft" money from foundations, businesses, or other sources disappears, the district and school often face the dilemma of how to fund ongoing costs. For example, when the corporate partner for a Los Angeles secondary school chose to discontinue its participation in the reform effort, the principal was faced with the difficult task of finding "replacement" funds in order to continue (Technology, 79). Thus, reform requires long-term planning to anticipate these eventualities and to ensure that there are sufficient resources available to maintain the effort. One principal recommends that hidden and ongoing costs be made explicit at the outset of the reform process, even if these costs are initially absorbed by grants or corporate partners. This, in turn, can help schools understand the nature of their ongoing obligation.

As Lesson 2 suggests, thinking ahead at the planning stages is important to the viability of any reform project. The Southern Maine Teacher Education Partnership, for instance, received external support to fund crucial positions that they later incorporated into either district or university budgets. Moreover, the Toronto Learning Consortium began its professional development program without substantial external funding; however, they did so at a time when they had sufficient internal resources to assure ongoing support (Teacher Professionalism, 114).

LESSON 8

SELF-ASSESSMENT

Reform is an ongoing process.

School reform is a dynamic process that requires participants to engage in nearly continuous self-reflection and program improvement. Although a carefully planned reform strategy may provide initial support in achieving program goals, most reforms proceed by trial and error, which means that activities require constant review and adjustment. Maintaining educational gains may also require constant skill upgrading and professional development among reform participants, while shifts in fiscal, material, and human resources, as well as changes in school and community demographics, can influence reform strategy. This lesson describes techniques that reformers use to maintain and enhance their reform efforts.

Maintaining Reform in an Evolving Climate

Reform is always a work in progress. Since the world is a dynamic place and conditions within schools and communities change over time, there is no guarantee that a strategy that works today will work equally well tomorrow. Even when resources remain stable, reformers must constantly review their strategies; reformers learn by making mistakes, by experimenting with new methods, and by inventing solutions to surmount unanticipated obstacles.

The task of reforming "never ends because the school is never static—there will always be an ongoing need for assistance on the technical dimension."

(Curriculum, 59)

Reformers must be responsive to newly identified needs that accompany the change process itself. For instance, participants must routinely examine whether their practices are leading to the desired results, secure training to remediate weaknesses, and take time to sharpen their content and instructional skills to keep them current. In a cross-cutting study of teacher education partnerships, the authors note that

> . . . long-term perspective and understanding of the change process, time, and energy . . . are critical for sustaining momentum. The *dynamic* nature of initiatives is evident. . . [C]hange is inherently uncertain and there is no road map for how to do this. As a result [reformers] require recurring assessment of where they are and where they are headed. Changing social and political climates shape the journey and create different needs.
>
> (Teacher Professionalism, 85)

Reformers can stay abreast of the changing conditions and needs of the community by conducting periodic needs assessments. By surveying the community or using available data, reformers can get insight on how they are doing.

CHANGING COMMUNITY NEEDS IN SAN DIEGO

The Limited-English Proficiency (LEP) program at one elementary school has remained responsive to the community's changing needs. By keeping abreast of community demographics, the school has been able to provide programs that are relevant to their target population. When the school began restructuring, the Spanish-speaking LEP population was declining, while the population of LEP students speaking Southeast Asian languages was growing. In response, school staff implemented a "Sheltered English" approach (with a native language component) for all students. A few years later, the Spanish-speaking LEP population began to grow again, while the influx of Asian immigrants leveled off. In response, staff reinstated a bilingual approach for Spanish-speaking students.

(Student Diversity, I-3.4)

Some educators have used a strategy that emphasizes iterative, self-reflective thinking to stay responsive to changing needs. Called *evolutionary planning*, this technique emphasizes using constant course corrections to maintain alignments between reform goals and changing school conditions. In addition to providing a means of responding to unexpected developments, evolutionary planning can better blend "top-down" and "bottom-up" participation (Curriculum, 88).

Using Evaluations for Program Improvement

Evaluation can help schools determine how to adjust the reform process to meet selected objectives. In order to succeed, evaluations must be linked to the agreed-upon objectives of the reform, and measure results that either directly or indirectly account for program progress. Evaluations can also measure staff processes, and thus indicate whether "course adjustments" are necessary. This latter type of evaluation is particularly useful during the early period of implementation.

GATHERING DATA AND EVALUATING PROGRAMS

The state of California's Department of Education sponsors a School Improvement Program (SIP) "to make learning and change part of the organization on a day-to-day basis." The SIP consists of a school self-evaluation, supplemented with periodic outside review. Based on the review, schools draft a concise improvement plan. The SIP provides a good example of how schools can continuously gather data and evaluate programs to determine whether they are meeting their reform objectives. Further, the SIP experience suggests that once they are receiving feedback, reformers may shift or hone their reform objectives.

(Systemic Reform, Vol. II, 13–14)

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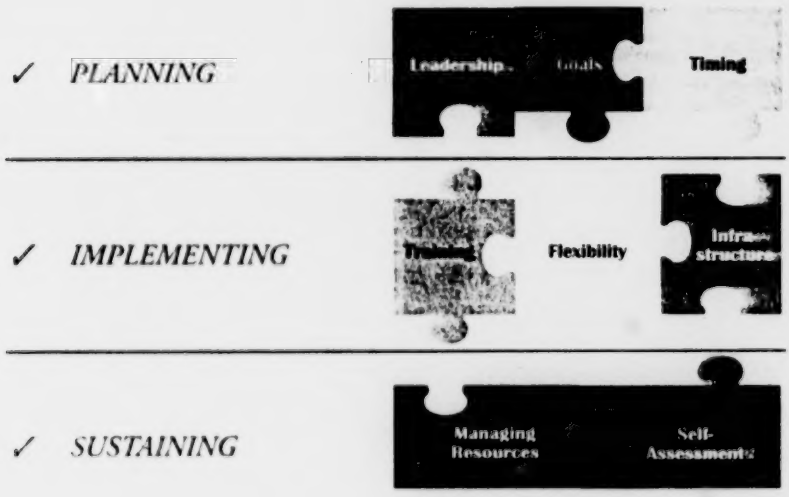
CONCLUSION

Nearly all education reforms, regardless of their scope or intended target, share a number of basic characteristics. This report has drawn upon 12 studies of education reform funded by the Department of Education, Office of Educational Research and Improvement (OERI), to describe eight key lessons that underlie successful reform efforts. Taken together, these lessons offer a comprehensive approach to reform that can guide policymakers and practitioners in planning, implementing, and sustaining school reform in their own communities. These lessons address the following topics:



While the specific aspects of reform differ widely among projects, the OERI studies of reform agree on at least one point—succeeding at reform requires much more than having a "good idea." Ultimately, reform is about collaboration and collegiality, on gathering a core group of people together to agree on a particular approach for improving education and learning. Successful reformers identify and train individuals who are participating in the change process, and arrange an organizational structure that reinforces reform goals. Simply put, education reform is about using resources in ways that create better learning environments and better schooling results for students.

Perhaps equally important, the OERI studies describe a role for practitioners that must be fully understood by reformers. While a high-level administrator or policymaker may embrace a particular reform strategy, it is those closest to the classroom, teachers, families, and community members, who will ultimately determine whether or not the reform will succeed. This raises a series of issues. For instance, if teachers are the engine of the reform process, there must be a

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mechanism in place to assure that they have the necessary skills to accomplish what is being asked of them. It is equally important that parents and students be empowered to assume new roles and responsibilities. Given the "local" nature of reform, one must ask: what will be required—of schools, communities, professional organizations, and others—to support teachers so that they can meet the challenge of reform? Student learning is not just about test results; it is also about engagement. Without the necessary commitment, the products or results of reform may be hopelessly compromised.

Although the eight lessons described above define the important elements that underlie successful reform efforts, readers are cautioned not to treat the lessons as separate components that might be adopted in a piecemeal fashion. Each lesson described in this report is a piece of a larger puzzle that is called school reform. It would be wise for potential reformers to take a moment before beginning a project to examine the pieces in order to see if all the necessary elements are present so that a complete picture can be assembled. For just as one might hesitate before trying to put together a puzzle with missing pieces, so too should any school reformer deliberate before attempting a reform that is missing one of the eight lessons identified above.

Since not all readers are at the same stage in their reform effort, this report has been designed to offer something for everyone. If you are a school reformer presently in the process of implementing a reform, this report may help you to reflect on your efforts, and perhaps to identify some additional issues that you may need to address. If you are in the process of planning or undertaking a reform, or simply have an idea that you would like to explore, use the enclosed planning guides and worksheets to help formulate and structure your initial reform efforts. Keep in mind that these tools are intended to help you think about some of the larger issues that will affect your reform proposal, and provide an initial framework to organize your thoughts.

Remember that in your initial planning you do not have to devise a single approach to reform or accomplish all the steps at once; rather, it is more important to lay out a potential course of action to which others may add their ideas. Good luck in your reform efforts.

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APPENDIX A

PUTTING THE PUZZLE PIECES TOGETHER

While it is not the intention of this appendix to offer readers a complete guide to reform planning, the eight lessons described in this report suggest a variety of key concerns that are likely to affect prospects for success. Taken together, the short exercises here are a "bridge" that will enable policymakers and practitioners to frame issues that will be essential to a strategic action plan.

SECURING STRONG LEADERSHIP

Successful reforms require strong leaders to help plan, initiate, and administer ongoing reform activities. Identifying capable individuals who can promote and sustain your reform idea is one of the more important decisions that you will face as you bring your reform to fruition. Good leaders characteristically:

- ✓ manage reform activities
- ✓ delegate authority
- ✓ assume responsibility
- ✓ build consensus
- ✓ secure participant buy-in
- ✓ gain bureaucratic support

Directions: In the space below, list leaders within your education community who might work on the proposed reform. Since no one person may possess all of the necessary skills, try to identify individuals with complementary abilities.

Name/Position	Strength

Identifying Goals

Successful reforms are those in which individuals internalize goals and take personal responsibility for carrying out assignments. Since participants in a proposed reform may have different ideas about how to approach a given issue, it is important to take time to identify the goals of your reform and secure buy-in from all participants.

Directions: In the space below, identify different strategies you might adopt to build consensus and motivate buy-in among potential team members.

Goal Setting — How will you clarify the goals and objectives of the proposed reform?

Delegating— How will you secure buy-in among participants?

Planning Reform Activities

Educators often use strategic action plans to help organize their reform efforts. Action plans can add structure to reform efforts because they provide a clear framework that arrays reform activities and time frames for accomplishing them. Because action plans are relatively general, they can be easily updated to accommodate different approaches to a proposed reform.

Directions: Use the framework provided below to sketch possible approaches to initiating and sustaining reform in your educational community. Remember that action plans need not offer a single approach to reform or accomplish all steps at once; what is important is to lay out a course of action that will help you organize and monitor your educational reform.

Reform Goal _____

Reform Objectives	Action Step	Timeline	Person Responsible

Implementing Reform

Educators need support when they are asked to make changes to curriculum, instructional methods, or teaching styles. Staff development activities may range from traditional in-service programs that introduce new instructional techniques, to one-on-one training that may take place during school or in the workplace.

Regardless of the type of intervention, training efforts should

- offer support to all individuals who will be participating in the reform;
- emphasize strategies to enable participants to implement reform; and
- recognize other school reform efforts that may influence the way reform affects the school.

Directions: Use the worksheet below to identify the type of training that will be offered to individuals participating in your reform.

✓ Will skill needs vary across groups (e.g., administrators, teachers, and parents)?

✓ What type of training will individuals need to perform their respective roles?

✓ What reform efforts are presently under way at your school, and how might your proposed project be linked with these ongoing reforms?

Sustaining Reform Efforts

Education reform often requires redesigning organizational infrastructure to support implementation. This may entail reexamining how staff and community members communicate and collaborate, or changing the way resources are budgeted to support reform activities.

Directions: The following exercise asks a number of questions about day-to-day operations within your school. As you proceed, think about how your present organization supports reform efforts, and what might be done to facilitate change in the future.

- Effective communication can reduce conflict by increasing participant understanding of reform objectives.
  - ✓ How is information presently disseminated in your school, and what steps can be taken to improve communication among staff?

- Collaboration can enhance reform efforts by assembling a wide range of players to solve common problems.
  - ✓ What opportunities for collaboration presently exist within your school, and how could these be changed to encourage reform participants to work together?

- Parents and communities can be valuable assets to reform.
  - ✓ What opportunities are presently available for parents and community members to participate in your school? How could these arrangements be augmented?

- Reform efforts often require the investment of significant capital and human resources.
  - ✓ What are some strategies that could be implemented to reallocate or acquire additional resources to support your proposed school reform?

- Periodic self-assessment is an integral part of reform that can help identify weaknesses and provide feedback to improve instruction.
  - ✓ What kind of information will you need to collect in order to assess the success of your reform efforts?

APPENDIX B

THE 12 EDUCATION REFORM STUDIES

This appendix provides a brief description of each of the OERI education reform studies. For further detail, see the reports themselves, which are listed in the References at the end of this report.

Taken together, the 12 OERI education reform studies offer a rich tapestry—a chance to look at the ways in which these initiatives were designed and implemented in schools and communities nationwide. Moreover, the array of case studies provides a remarkable opportunity to examine the various reforms in order to identify issues, patterns, and "lessons" that could inform others in planning, designing, or implementing reforms in their own schools.

Assessment: Assessment is a tool that can produce and support a variety of education reforms, especially in the area of curriculum. Assessments help students, teachers, schools, and parents understand what competencies are valued. This, in turn, can significantly affect what is taught and how it is taught. In this sense, the assessment process can improve instruction and raise standards of performance. Furthermore, if students are to acquire new skills, new ways of measuring their success in acquiring those competencies may be necessary. This study focuses on the evolving field of assessment, and on new methodologies that are being developed and implemented to measure the broader, more integrated skills, knowledge, and behaviors that many students are now expected to acquire.

At Risk: This research focuses on efforts directed at students who are at risk in schools that are working to: 1) raise academic standards, 2) enhance the academic climate of in-school and out-of-school environments, and 3) prevent students from dropping out of school.

Community Involvement: Focusing on the upper elementary and middle school grades (4–8), this study examines programs actively involving disadvantaged and other parents and the community in the education of children. The study describes practices and programs that increase involvement by 1) helping parents strengthen home learning; 2) restructuring schools with parent input or parent involvement as a product; and 3) implementing districtwide programs that offer parents and the community a broad choice of roles. The research discusses exemplary programs, providing models and examples of ways in which these activities contribute to student learning.

Curriculum: Schools today are facing the challenge of teaching students how to become capable thinkers, learners, and problem solvers. The world in which the present generation of students will be living as adults will require that they possess basic skills as well as a broader range of higher order thinking skills. To educate students to meet these new demands, new types of teaching and learning activities must be introduced in classrooms. With reference to mathematics, science, and higher order thinking, this study examines emerging classroom practices and the roles that students, teachers, parents, and others must play to meet this new challenge.

Early Childhood Education: This study focuses on the early development and education of children, especially of those who are at risk, from birth up to and through the early primary school years. It also covers their transition from home to child care, preschool, and elementary school. The study examines 1) how practitioners provide innovative, effective services to prepare young children for success when they enter elementary school; 2) how programs are enhancing the capacity of parents to serve effectively as educators; and 3) how mechanisms can be developed that help parents gain access to other services that, while not directly linked to schools, help prepare children for entering school.

School-Based Management: School-based management refers to the general principle of increasing administrative authority at the school level, enabling individual school sites to control resources, to make decisions locally, and to shape programs to meet their needs. It involves a number of organizational strategies relating to three areas of decision making: budget, curriculum, and personnel. This study examines the changing roles and responsibilities of those involved in school-based management activities; explores issues associated with designing, implementing, and assessing school-based management; and finally, reviews the extent to which school-based management affects teaching and learning.

School-to-Work Transition: The School-to-Work Opportunities Act of 1994, along with a number of other programs supported by federal and state governments and employers, is changing the way in which schools and employers perceive their respective roles in the transition process from school to employment. Many American schools have recently designed initiatives to introduce students to the world of work in general and the workplace in particular. This study examines model programs that bring together schools, businesses, and other community institutions to ensure that employment-bound students attain the education and training they need in order to enter the highly competitive world of work.

Student Diversity: As the public school population continues to change and become more diverse, educators are pressed to find ways of engaging students, particularly those with limited English proficiency, in the learning process. This study explores school organizational changes as well as instructional classroom management strategies that language arts programs at the upper elementary level and science and mathematics programs at the middle school level are using to educate LEP students.

Systemic Reform: Systemic reform refers to the deliberate, systematic alignment of curricular goals, student assessments, textbooks, and teacher education and working conditions. Poor alignment may inhibit the effectiveness of other education reforms in schools. In the 1980s, many reforms focused on a single aspect of the education system, but few addressed the system as a whole. This study describes efforts at the school, district, and state levels to develop and implement reforms simultaneously across all these areas of the education system.

Teacher Professionalism: The demands on teachers are changing. The current climate of reform requires that they change their roles as instructors, classroom leaders, and members of school decision-making bodies. As more flexibility is built into state regulations, and as more accountability is expected at the school and classroom level, teachers often assume responsibility for redesigning curriculum to meet new student needs, for understanding and responding to the different ways in which students learn, and for exercising broad discretion and professional judgment in the classroom. This study focuses on reform in teacher education that is designed to help teachers and other school professionals meet these new requirements.

Technology: American students are often considered to possess insufficient higher order thinking skills (such as skills in creative and critical thinking, understanding material in depth, and logical reasoning and problem solving). There is some evidence that technology can help students develop these skills. This study looks at technology-based reform programs—efforts that have used technology not to drive reform, but to assist in accomplishing its goals. The research describes activities that promote higher order thinking, efforts to increase educational opportunities through distance learning, and technology-linked programs to enrich the educational experiences of at-risk students.

Uses of Time: Learning and organizational theory suggest that schools are organized in ways that may not serve students well. Restructuring the school day and rethinking how time is used offers considerable opportunity to make this resource a productive element of a school reform strategy. This study examines a variety of questions related to the quantity and the quality of time spent on instruction and planning and describes a variety of alternative approaches.

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